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Reply Brief in Response
to Examiner's Answer of 26 July 2005

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**IN THE UNITED STATES
PATENT AND TRADEMARK OFFICE**

Appl. No. : 09/879,698
Applicant(s) : GUTTA et al.
Filed : 12 June 2001
TC/A.U. : 2636
Examiner : LAI, Anne Viet Nga
Atty. Docket : US-010302

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On: 23 September 2005

By: 

Title: **VEHICLE TRACKING AND IDENTIFICATION OF EMERGENCY /LAW
ENFORCEMENT VEHICLES**

Mail Stop: **APPEAL BRIEF - PATENTS**
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REPLY BRIEF UNDER 37 CFR 41.41

Sir:

This is a reply brief in response to the Examiner's Answer of 26 July 2005 in
the above referenced case.

In section (2) of the Examiner's Answer, the Examiner Includes contrary
statements. In the first paragraph of section (2), the Examiner acknowledges that the
applicants' brief contains a statement identifying related appeals and interferences,
and in the second paragraph, the Examiner states that the brief does not contain
such a statement. The first paragraph is correct.

In section (7) of the Examiner's Answer, the Examiner references section 37
CFR 1.192(c)(7). Section 1.192 has been removed from 37 CFR, effective 13
September 2004. The applicants' brief was filed under 37 CFR 41.37. In accordance
with 37 CFR 41.37(vii), each claim or group of claims that is argued separately is
considered by the Board. In the context of this application, each of the following claim

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groupings has been argued separately (1-3, 8, and 10-13), (14 and 16), (17-21), (4-6 and 9), (15), and (7), and the applicants respectfully request that the rejection of each of these claim groupings be considered independently by the Board.

The following remarks are in reference to section (10) of the Examiner's Answer.

With regard to claims 1-3, 8, and 10-13, the applicants respectfully maintain that the Examiner has mischaracterized the applicants' claimed invention at page 4, lines 1-6. The Examiner asserts that the prior art (Breed) teaches "capturing frame images and mapping location of the approaching vehicle on a display surface". While this may accurately characterize the prior art, it is not consistent with the applicants' claim 1, which recites: "a display surface ... for displaying **video image data from the ...camera**".

The applicants respectfully maintain that Breed does not teach the display of video image data from a camera. Breed specifically teaches against displaying video image data from a camera, and instead, teaches the pre-processing of the video image data from a camera to present other images (icons) on the display. The images that Breed displays are not from a camera, as specifically claimed.

In like manner, with regard to claims 14 and 16, the Examiner asserts, at page 5, lines 1-6, that Breed teaches "a system to ... display video image data of an approaching vehicle", whereas claim 14 specifically recites "a display surface ... for displaying **video image data from the ...camera**". Breed's displayed images are not video image data from a camera, and Breed specifically teaches against displaying images from a camera.

In like manner, with regard to claims 17-21, the Examiner asserts, at page 5, lines 1-6, that Breed teaches "a system to ... display video image data of an approaching vehicle", whereas claim 17 specifically recites "a display surface ... for displaying **video image data from the ...camera**". Breed's displayed images are not

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video image data from a camera, and Breed specifically teaches against displaying images from a camera.

With regard to claims 4-6 and 9, the Examiner asserts that it would have been obvious to combine Lee and Breed to achieve the applicants' claimed invention.

Claims 4 and 5 include "selection means for selecting the display of video image data from one of the forward and rearward facing cameras for display on the display surface".

Claim 6 includes controlling "pan, tilt, and zoom motors to provide an enhanced view of the portion [of the display] touched".

Claim 9 includes touching the display surface to indicate a vehicle to be tracked.

The applicants note that Breed specifically teaches:

"Any system which displays a picture of the object on the screen that is inside the vehicle is also going to confuse the driver... Thus, displays on a CRT or LCD are not natural and it is difficult for a driver to adjust to these views." (Breed, [0007]).

The applicants respectfully maintain that it would not be obvious to one of ordinary skill in the art to combine Lee and Breed, because such a combination is in direct opposition to Breed's explicit and specific directive not to display pictures of objects on the vehicle display screen, as claimed in each of these claims.

Further, given that Breed specifically warns against confusing the driver, one of ordinary skill in the art would not be lead by the teachings of Breed to selectively present views from forward and rearward facing cameras, as specifically claimed in claims 4 and 5, or to modify the view using pan, tilt, or zoom controls, as claimed in claim 6, or to pick out an image of a vehicle to be tracked, as claimed in claim 9.

In like manner, with regard to claim 15, as noted above, it would not be obvious to combine Lee and Breed, because such a combination is in direct opposition to Breed's explicit and specific directive not to display pictures of objects on the vehicle display screen. And, one of ordinary skill in the art would not be lead

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by the teachings of Breed to pick out an image of a vehicle to be tracked, as claimed in claim 15.

With regard to claim 7, the rejection is based on a combination of Breed's vehicle recognition system and Lee's image display system, which as noted above, is contrary to Breed's explicit and specific directive not to display pictures (images from a camera) on a driver's display screen.

The following remarks are in reference to section (11) of the Examiner's answer.

In response to the applicants' argument that Breed does not teach displaying video images from a camera, the Examiner obfuscates the issue by introducing definitions of cameras, video displays, and icons.

The Examiner acknowledges that Breed does not display the video image data from the camera: "Breed prefers to display a video image of representative form (icon) identifying a particular detected object *instead* of the video image of actual form of the object" (Examiner's Answer, page 8, lines 5-7).

The Examiner asserts that "the icon on display is still a video image from image data obtained by the camera". The Examiner's assertion would appear to imply that the icon's image is derived from the image data from the camera. The applicants respectfully note that Breed's icon is selected from a set of predefined icons, based on an analysis of the image data from the camera; Breed's icon is not created from the image data from the camera. The applicants do not claim displaying a pre-defined image that is selected based on image data from a camera; the applicants specifically claim a display that displays the video image data from the camera.

The Examiner further asserts that "Since the icon is a video image with data obtained from data scanned by the camera system, the teaching of Breed is the same as the video image data from the camera of the applicants claimed invention". The applicants respectfully disagree with this assertion, and maintain that: 1) Breed's

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icon does not contain data obtained from data scanned by the camera system; and
2) data obtained from data scanned by the camera system is not equivalent to the data scanned by the camera.

The Examiner asserts that Breed's teachings in paragraph [0007] "indicates his preference", and that Breed's teaching of the display of extracted "features" derived from Breed's three-dimensional map, as taught in paragraphs [0132] and [0134] counteracts the teachings of paragraph [0007] (Examiner's Answer, page 8, third paragraph).

Breed's [0007] reads:

"[0007] Many systems have also been proposed that display a view of the blind spot, using a video camera, onto a display either on the instrument panel or on the windshield as a "heads-up" display. Any system which displays a picture of the object on the screen that is inside the vehicle is also going to confuse the driver since he or she will not be able to relate that picture to an object such as another vehicle in the blind spot on the side of the host vehicle. Additionally, the state of the art of such displays does not provide equally observable displays at night or in bright sunlight. Thus, displays on a CRT or LCD are not natural and it is difficult for a driver to adjust to these views. The lighting of the views is too faint when sunlight is present and too bright when the vehicle is operating at night. Therefore, none of these television-like displays can replace the actual visual view of the occupant." (Breed)

The applicants respectfully maintain that this specific teaching of Breed regarding the presentation of actual images/pictures from a camera is adamant, and constitutes more than a mere "preference".

Breed teaches the creation of a three-dimensional map using a neural network that processes the data from a variety of input devices, including radars, infrared detectors, and cameras. Breed uses the term "feature" to include a variety of parameters used to create this map, including, for example, the angular position of a steering wheel [0091], edges of objects [0167], windshield, tires, radiator grill, and headlights [0168], and range information [0241]. Breed teaches that the display can be configured to display the feature, or a representation of the feature.

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The applicants respectfully maintain that some features, such as angular position, speed, distance, etc. are best represented directly, but in view of Breed's specific teachings, the actual image from the camera cannot be considered to be one of the 'features' that Breed teaches should be displayed. That is, merely because Breed teaches that some features can/should be displayed directly, one cannot assume that this teaching obviates Breed's specific directive not to display images from a camera.

Further, assuming in argument that Breed's teachings at [0132] and [0134] mitigate Breed's directives of [0007], the applicants respectfully note that Breed's displayed 'features' are the features of Breed's three-dimensional map that is created by Breed's neural network, and not, per se, the claimed images from the camera. As is well known in the art of pattern recognition, the input to a neural network is not an "image from a camera", per se, but rather, a mathematical form that is derived from the image, indicating, for example, edges, boundaries, colors, and the like. That is, for example, an extracted edge of an object is not the image from the camera, but rather, a derived form, such as a matrix or vector representation of particular aspects of the image. In view of Breed's teachings at [0007], there would be no reason for Breed to retain the image from the camera once the 'feature' was extracted and provided as input to Breed's neural network.

The Examiner also maintains that Breed's teaching of a scanning laser is equivalent to the applicants' claimed pan/tilt/zoom cameras. The applicants respectfully disagree, and respectfully maintain that a scanning laser cannot be said to correspond to the applicants' claimed "at least one of a pan, tilt, and zoom motor operatively connected to the at least one camera".

The Examiner also refers to Breed's reference to pan/tilt/zoom control in paragraph [0187]. The applicants respectfully note that this reference is to an electronic, on-chip, pan/tilt/zoom capability, which is not equivalent to pan/tilt/zoom motors that are used to change a camera's optical field of view. There are no motors

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associated with Breed's cameras, whereas the applicants specifically claim at least one pan/tilt/zoom motor coupled to a camera.

CONCLUSIONS

Because Breed is adamant in his teaching against the display of images from a vehicle-mounted camera, the applicants respectfully maintain that the rejection of claims 1-21 in the subject application is unwarranted under 35 U.S.C. 103(a) over Breed and/or over Breed and others.

Additionally, in light of Breed's specific teaching that the display of real images causes confusion to a driver, the applicants respectfully maintain that the rejection of claims that deal with selecting among such real images, such as forward and rearward facing images, and the rejection of claims that deal with interacting with the display of such real images from a camera is unwarranted under 35 U.S.C. 103(a) over Breed and others.

Respectfully submitted,



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